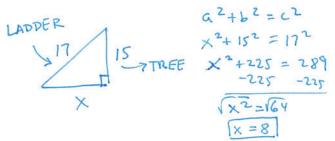
Draw a sketch of the picture on your Markerboard. Solve the problem on paper.

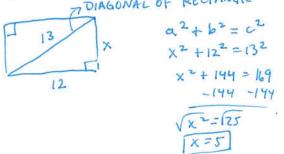
Write your answer to the question on the Markerboard.

DATE: \_\_\_\_

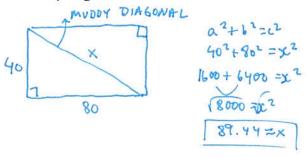
1. A ladder is 17 feet tall. If it leans against a tree 15 feet above the ground, how far from the base of the tree is the ladder?



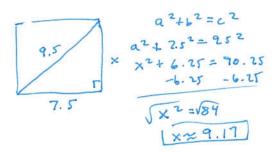
2. The diagonal of a rectangle is 13 inches. If its length is 12 in., what is its width? RECTANGLE



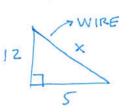
3. Elisa is walking home and comes to a muddy vacant lot. She can walk along two sides of the rectangular lot or she can walk across the muddy diagonal. The length of the lot is 80 m and the width is 40 m. What is the length of the muddy diagonal?



4. The diagonal of the screen on the TI-Nspire is 9.5cm. If the width of the screen is 7.5cm, how tall is the screen?

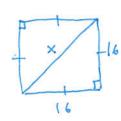


5. How long is a wire that reaches from the top of a 12-ft pole to a point on the ground 5 feet from the pole?



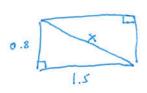
 $a^{2} + b^{2} = c^{2}$   $5^{2} + 12^{2} = x^{2}$   $25 + 144 = x^{2}$   $\sqrt{169} = \sqrt{x^{2}}$  13 = x

6. The competition area for judo is a square mat that measures 16m on a side. What is the diagonal length of the mat?



 $|6^{2}+16^{2}=x^{2}$   $256+256=x^{2}$   $\sqrt{5}12=\sqrt{x^{2}}$   $22.63 \approx x$ 

7. A rectangular postage stamp is 1.5 inches long and 0.8 inches wide. What is the length of the diagonal?



 $a^{2} + b^{2} = c^{2}$   $0.8^{2} + 1.5^{2} = x^{2}$   $0.64 + 2.25 = x^{2}$   $\sqrt{2.87} = x^{2}$   $\sqrt{1.7} = x$ 

8. Find the length of a leg of a right triangle if one leg is 17 cm and the hypotenuse is 37 cm.

